

REMARKS

Claims 1-18, drawn to non-elected inventions, are cancelled. Applicants reserve the right to pursue these claims in a continuation application or to take other appropriate action as deemed necessary to protect the non-elected inventions. Applicants do not hereby abandon or waive any rights in the non-elected invention.

Claims 19-21 have been amended. Support for these amendments can be found in the Specification, for example, on page 3, lines 4-13.

Newly added Claims 22-24 are directed to allele-specific oligonucleotides; support for these claims can be found in the Specification, for example, on page 10 line 8 to page 12, line 3. Newly added Claims 25, 26, 31 and 32 are directed to expression vectors comprising the nucleic acids of the invention. Support for these claims can be found in the Specification, for example, on page 18, line 23 to page 19, line 14. Newly added Claims 27, 28, 33 and 34 are directed to host cells comprising the expression vectors of the invention. Support for these claims can be found in the Specification on page 19, line 15 to page 22, line 2. Newly added Claims 29 and 30 are directed to nucleic acid molecules consisting of a portion of at least 10 contiguous nucleotides of SEQ ID NO. 1, wherein said portion comprises nucleotide position 3949 of SEQ ID NO. 1 and the nucleotide at that position is a nucleotide other than thymidine. Support for these claims can be found in the Specification, for example, on page 3, lines 4-10. Newly added Claims 35-38 are directed to oligonucleotide microarrays. Support for these claims can be found in the Specification, for example, on page 9, line 29 to page 12, line 3. No new matter is added.

Rejection of Claims 19-21 under 35 U.S.C. § 101

Claims 19-21 are rejected under 35 U.S.C. § 101 because the Examiner states that the claimed invention is directed to non-statutory subject matter.

Applicants have amended the claims to recite an *isolated* nucleic acid molecule and an *isolated* allele specific oligonucleotide, as suggested by the Examiner, thereby obviating the rejection.

Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 19-21 under 35 U.S.C. § 112, First Paragraph

Claims 19-21 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner states the claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, the Examiner states the claims are broadly written and encompass any nucleic acid sequence that comprises a portion of SEQ ID NO 1 and need only be a minimum of 10 nucleotides in length and that the claims do not require that the nucleic acid molecule comprise more than 1 nucleotide from SEQ ID NO 1.

Claims 19-21 have been amended to recite an isolated nucleic acid molecule comprising the nucleic acid sequence of SEQ ID NO: 1, wherein the nucleotide at position 3949 of SEQ ID NO: 1 is a nucleotide other than thymidine, or the complement thereof. New Claims 29 to 34 are directed to an isolated nucleic acid molecule consisting of a portion of at least 10 contiguous nucleotides of SEQ ID NO: 1, wherein said portion comprises nucleotide position 3949 of SEQ ID NO 1 and wherein the nucleotide at that position is a nucleotide other than thymidine (specifically guanine) and to expression vectors and host cells comprising these molecules. Clearly, Applicants were in possession of the claimed invention, as amended, at the time of filing.

Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claim 20 Under 35 U.S.C. § 112, Second Paragraph

Claim 20 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Examiner states that Claim 20 is indefinite in the recitation of “corresponding,” as it is unclear whether this refers to a specific position with respect to SEQ ID NO: 1. Applicants have amended Claim 20 to remove the recitation of “corresponding,” thus obviating the rejection.

Rejection of Claims 19-21 under 35 U.S.C. § 102 (b)

Claims 19-21 are rejected under 35 U.S.C. § 102(b) as being anticipated by Genbank Accession Number L12350 (12/1993), Accession number X61910 and by Kohler *et al.* (*BioTechniques*; 1998, vol. 25, pp 80-85). Applicants note the typographical error in the rejection over Accession Number L12350 which states that Claims 1-19 are rejected; Applicants presume that the Examiner intended to reject Claims 19-21.

Claims 19-21, as amended, recite isolated nucleic acid molecules comprising the nucleic acid sequence of SEQ ID NO: 1, wherein the nucleotide at nucleotide position 3949 of SEQ ID NO: 1 is a nucleotide other than thymidine (specifically, recited in Claim 20 as guanine), or the complement of said nucleic acid molecule. Also claimed is an isolated allele-specific oligonucleotide that hybridizes to a nucleic acid molecule of the invention.

To anticipate a claim under 35 U.S.C. § 102(b), the cited reference must teach every element of the claimed invention.

Accession number L12350

The Examiner states that the Accession number L12350 teaches the sequence of SEQ ID NO: 1. Further, the Examiner states that although the reference does not teach that position 3949 is polymorphic, such is considered an inherent property of the reference.

The cited reference teaches SEQ ID NO: 1, which has a thymidine at position 3949. This reference does not anticipate Applicants' invention because there is no teaching of a nucleotide that is not thymidine at position 3949, as currently claimed by Applicants. Reconsideration and withdrawal of the rejection are respectfully requested.

Accession number X61910 (June 1992)

The Examiner states that the accession number teaches a sequence that is 291 nucleotides long and comprises positions 3941-3955 of SEQ ID NO: 1. The Examiner states that the recitation of "polymorphic site" has not been given patentable weight.

Accession number X61910 teaches a thymidine at position 3949. As stated above, Applicants' amended claims recite a nucleic acid molecule comprising a nucleotide at position

3949 that is not thymidine. Therefore, the claims as amended are not anticipated by Accession number X61910.

Reconsideration and withdrawal of the rejection are respectfully requested.

Kohler et al.

The Examiner states that “Kohler *et al.* teaches nucleic acids for use in detecting G to T target mismatches (see abstract) (see p. 81, col. 2). As the claims are not limited to only contiguous sequences from SEQ ID NO: 1, the recitation of a nucleotide position is arbitrary”.

The Kohler *et al.* reference merely teaches an assay for detecting polymorphisms, specifically, for the genotyping of human apolipoprotein E alleles. The Kohler *et al.* reference does not teach or suggest nucleic acid molecules comprising SEQ ID NO: 1, wherein the nucleotide at nucleotide position 3949 of SEQ ID NO: 1 is a nucleotide other than thymidine. Therefore, the claims, as amended, are not anticipated by the reference.

In view of the above, Applicants’ amended claims are not anticipated by any of the art cited. Therefore, reconsideration and withdrawal of the rejection are respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call Lisa M. Treannie or the undersigned.

Respectfully submitted,

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